

CLAIMS

WE CLAIM:

- 5 1. A digital printing system comprising:
 a personal computer comprising a printer driver, wherein said printer driver receives
print data and compresses said print data;
 a printer operatively connected to said personal computer, said printer comprising a
data expansion system and a page-width color inkjet printhead; and
10 a transmission system operatively connected to both said personal computer and to
said printer for transmitting said compressed print data from said personal computer to said
data expansion system of said printer.
2. A digital printing system according to claim 1, wherein said printer driver manages
15 a buffer having first and second layers, said first layer of said buffer containing background
contone data and said second layer of said buffer containing foreground bi-level pixel data.
3. A digital printing system according to claim 2, wherein said background contone
data is color data and wherein said foreground bi-level data is black data.
- 20 4. A digital printing system according to claim 3, wherein said system is operative to:
 composite a black image object with said bi-level second layer of said buffer;
 composite a contone color image object with said contone first layer of said buffer;
 wherever a contone color image object obscures said bi-level second layer, said
25 obscured bi-level second layer pixel data are composited with said contone first layer and
removed from said bi-level second layer before a contone color image object is composited
with said contone first layer.
5. A digital printing system according to claim 2, wherein EDRL compression is used
30 to compress said foreground bi-level pixel data.

6. A digital printing system according to claim 2, wherein JPEG compression or wavelet compression is used to compress said background contone data.
7. A digital printing system according to claim 1, wherein said transmission system
5 comprises a universal serial bus (USB) connection.
8. A digital printing system according to claim 1, wherein said compressed print data
comprises data from a page and wherein said data expansion system is operative to expand
said compressed print data as said page is being printed.
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9. A digital printing system according to claim 1, wherein said data expansion system
is operative to decompress 267 ppi contone CMYK image data, halftone resulting contone
pixels to 1600 dpi bi-level CMYK dots, decompress 800 dpi bi-level black text data, and
composite resulting bi-level black text dots over the corresponding bi-level CMYK image
15 dots.
10. A digital printing system according to claim 1, wherein said page-width color inkjet
printhead is an 8" page-width drop-on-demand microelectromechanical inkjet ("Memjet")
printhead.
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